

## REMARKS

Claims 2, 3, and 5-8 are pending in the application. No new matter has been added. Reconsideration of the claims is respectfully requested in view of the discussion presented below.

### **Correspondence Address and Docket Number**

A Change of Correspondence Address was submitted in this case on January 20, 2004, and was received at the PTO on January 23. A copy of the Change in Correspondence Address is enclosed herewith. Applicants note that the Office Action of February 11, 2004, was mailed to the previous correspondence address. Applicants respectfully request that the Examiner ensures that future correspondence be directed to Customer No. 38846. Also, the attorney docket number has been changed to 1010.8155UW: the Examiner is respectfully requested to use this new docket number in future correspondence.

### **Claim Objection**

Claim 6 was objected to for depending from claim 1, which has been canceled. Claim 6 has been amended to correct its dependence.

### **Rejection under 35 U.S.C. § 112**

Claims 2, 3, and 5-8 are rejected under 35 U.S.C. § 112, second paragraph for being indefinite. In particular, with regard to claim 7, it is stated in the Office Action that "it is not clear how and why the steps **sweeping the tuning currents** to pass through different current combinations, including a current through the reflector section in **one direction** and then in **a second direction** [sic]".

As is explained in the Specification at page 5, lines 11-16, the present invention is related to a method of evaluating tunable lasers and determining suitable laser operation points, i.e. conditions under which the laser emits light in a stable single mode. The laser contains two or more tunable sections, i.e. at least a reflector section and a phase section, in which the injected current can be varied in a known manner. Thus, the operating points correspond to different combinations of the control currents. In an illustrative example, where there are two control currents, IA and IB, the combinations of (IA<sub>1</sub>, IB<sub>1</sub>) may correspond to the values of the currents

for one operation point while a different combination of values of IA and IB, namely (IA<sub>2</sub>, IB<sub>2</sub>) corresponds to the values of the currents for a second operation point.

The effect of hysteresis in the laser is explained at, *inter alia*, page 8, lines 9-19. There it is stated that the output power and wavelength output from a laser, for a given set of control currents, may depend on whether the reflector current was reduced to reach the control value or whether the reflector current was increased to arrive at the value. In other words, the output power and wavelength of a particular operation point, e.g. the output power and wavelength that correspond to the combination of control currents (IA<sub>1</sub>, IB<sub>1</sub>), may depend on whether the reflector current, IA, was increased from a lower value to reach IA<sub>1</sub>, or was decreased from a higher value to reach IA<sub>1</sub>. Thus it is important to characterize the laser for both increasing the current and reducing the current, so that those current combinations that show hysteresis can be avoided.

The method of claim 7 includes “sweeping the tuning currents to pass through different current combinations, including sweeping a current through the reflector section in one direction and then in a second direction.” Thus, sweeping the tuning current means changing the current in the same direction e.g. from a low value to a high value, or from a high value to a low value. This permits the characterization process to determine those operating points that show hysteresis.

In view of this explanation, it is believed that the phrase “sweeping the tuning currents” would be understood by one of ordinary skill to mean changing the tuning currents. Furthermore, the terms in “one direction” and then “in a second direction” would be understood by one of ordinary skill in the art to mean i) increasing the tuning current (first direction) and then reducing the tuning current (second direction) or ii) decreasing the tuning current (first direction) and increasing the tuning current (second direction). Claim 7, therefore, would be understood by one of ordinary skill in the art and is not vague.

Claims 2, 3, 5, 6, and 8 were rejected because of their dependence from independent claim 7.

In view of the above discussion, it is believed that all pending claims comply with 35 U.S.C. § 112.

## Conclusion

In view of the reasons provided above, it is believed that all pending claims are in condition for allowance. Applicant respectfully requests favorable reconsideration and early allowance of all pending claims.

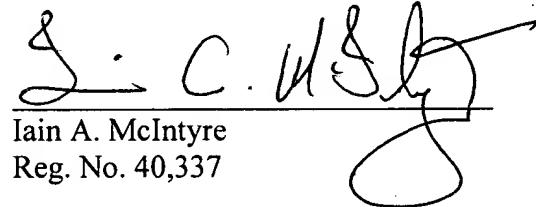
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Iain A. McIntyre at 952-253-4110.

Respectfully submitted,

CCVL, P.A.  
Customer No. 38846

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By:

  
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Iain A. McIntyre  
Reg. No. 40,337